

---

# UNIT 26 COMMON DISEASES OF THE SKIN

---

## Structure

- 26.1 Introduction
- 26.2 Symptoms of Some Skin Infections and What They Mean
- 26.3 Skin Infections
  - 26.3.1 Scabies
  - 26.3.2 Skin Ulcers
  - 26.3.3 Skin Sepsis
  - 26.3.4 Fungus Infections
  - 26.3.5 Leprosy
  - 26.3.6 Virus Infections
  - 26.3.7 Head and Body Lice
- 26.4 Other Skin Conditions
  - 26.4.1 Heat Rash
  - 26.4.2 Eczema
  - 26.4.3 Urticaria
  - 26.4.4 Leucoderma
- 26.5 Preventive Care of the Skin
- 26.6 Summing Up
- 26.7 Answers to Check Your Progress Exercises

---

## 26.1 INTRODUCTION

---

The skin covers the entire body. It has three layers: the outer layer, a middle layer and an inner layer. The inner layer contains the sweat glands, the nerves and cells sensitive to touch, the pigment cells (which give colour to the skin), and hair follicles from which the hair grow.

**The skin performs three important functions:**

- It protects the body from harmful organisms. Due to the covering of the skin, the organisms cannot enter the body.
- There are special cells in the skin which are sensitive to the sense of touch, and help us to feel. Because of this, the skin is referred to as one of the sense organs of the body.
- The skin also has sweat glands, which help to control body temperature. As you know, when we sweat in hot weather, it makes us feel cool.

Normally, the skin is smooth and of uniform colour, and in most places, covered with small hair. Any darker or lighter patches on the skin, itching, secretion or rash indicate disease.

The skin, if not washed properly and regularly, will tend to get infected with the organisms that are present on the skin. Some diseases and infections of the skin are only on the surface and do not harm the rest of the body. These are scabies, fungus of the skin and white discolouration of the skin. But some serious diseases, like measles, leprosy and chicken-pox, involve the skin and also affect the rest of the systems. Leprosy, for example, is actually a disease of the nerves. Its first symptom is discolouration of certain skin, areas of skin leading to skin lesions. In the later stages, nodules appear on the skin.

In this Unit, we shall read about some common skin infections, how to treat them and how to take preventive care of the skin.

## Objectives

After studying this Unit, you should be able to

- recognize symptoms of skin infections
- understand what the symptoms mean
- know how to treat simple skin infections
- understand when to refer the child to the doctor
- explain to parents and children how to take preventive care of the skin

## 26.2 SYMPTOMS OF SOME SKIN INFECTIONS AND WHAT THEY MEAN

A skin lesion indicates that there may be some disease. It is important to know a detailed history of the course of the skin lesion — how the lesion occurred, whether there is itching or pain or loss of sensation on the lesion, the distribution of lesions on the skin, their size and colour — to identify the type of skin infection.

The following are the symptoms which will help you to identify the type of skin infection.

- 1) **Itching on lesions:**— This is an important symptom in recognising skin lesions and identifying the disease. Itching is very common in fungus, scabies and heat rash. In measles and chicken-pox, it occurs at the later stages when the rash is receding. In leprosy there is no itching. Eczema is characterised by intense itching.
- 2) **Wet or dry lesions:**— Usually fungal infections and scabies are dry, while eczema is wet and sticky.
- 3) **Distribution of lesions:**— The part of the body on which the lesion appears helps to identify the infection. Scabies, which is the commonest infection of the skin, causes lesions between the fingers, in the armpits, wrists and buttocks. It rarely occurs on the palms and soles, except in very young babies.

Herpes simplex or cold sores occur on the lips.

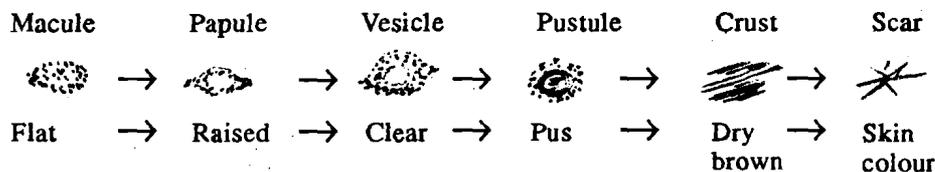
Measles starts on the hair line.

Chicken-pox starts on the body.

- 4) **Size of the lesion:**— When there are many small lesions, it is called a 'rash'. This is seen in measles and heat rash.

In ringworm (a fungal infection) and in leprosy, the lesions are larger and fewer. These are called 'patches'.

- 5) **Colour of lesion:**— They may be red as in rash, or pale as in leprosy. In fungus, the skin is pale and scaly.
- 6) **Course of the lesion:**— Infections like measles and chicken-pox are progressive. That is, they start as flat lesions, and go through a particular sequence. In chicken-pox the lesions become bigger and get filled with fluid, which then turn yellow and finally go down, leaving a scar.



STAGES OF SOME SKIN LESIONS

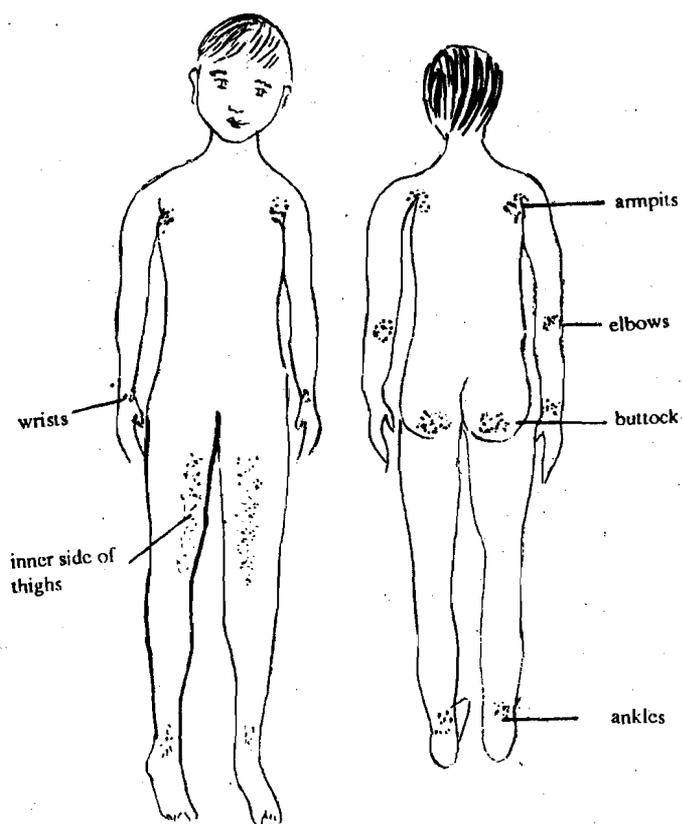
In measles, the rash appears on the fourth day of fever, while in chicken-pox it occurs on the second day of fever. The virus of chicken-pox sometimes manifests as Herpes Zoster (You shall read about this later in this Unit).

Heat rash appears on exposure to heat and is not accompanied by fever.

In this Section, we shall read about some common skin infections, their symptoms, causes and treatment.

### 26.3.1 Scabies

**Symptoms:** This is the commonest skin infection seen in children. It is a highly infectious condition. It is characterised by small lesions in the webs of the fingers, wrists, armpits, inside of the thighs and buttocks. They are small raised individual lesions and are very itchy. The itchiness increases at night. The lesions are dry. As the infection progresses, the lesions join together and because of scratching, become infected. At this stage, they are yellow and covered with pus. Scabies rarely affects the face, palms and soles of the feet, except in very small babies.



DISTRIBUTION OF SCABIES

**Causes:** Scabies is caused by a tiny insect that burrows in the skin, and spreads from one person to another through close contact or from clothes. Therefore, if one person in the family gets infected, it soon spreads to the whole family. So the whole family has to be treated at the same time.

**Prevention:** The children have to be taught to keep the skin clean by regular baths and the clothes have to be washed as often as possible.

**Treatment:** Consult the doctor immediately. There is a solution called Benzyl Benzoate which is very effective in controlling the infection. The doctor will most likely prescribe this.

The solution has to be applied all over the body, except the face, after a good scrub bath. It is better not to wash it off the next day. Instead, apply more solution again. After applying this for three consecutive days, on the fourth day, the child is given a bath. Small children are prescribed half-strength Benzyl Benzoate i.e. equal amounts of Benzyl Benzoate and oil.

The whole family has to be treated at the same time, to prevent re-infection from one another. The clothes have to be washed thoroughly and dried in the sun. This includes bed clothes.

### 26.3.2 Skin Ulcers

**Symptoms and Causes:** If an ordinary scratch or wound becomes infected, it forms an ulcer. It may appear on any part of the body. If the child is malnourished, the ulcer becomes large and does not heal.

**Treatment:** Usually, the child tends to meddle with the ulcer and keeps removing the scab (the dry covering on the wound) that forms. This should be prevented. The ulcer should be washed clean with permanganate solution and covered with a dry gauze.

**Large ulcers should be referred to the hospital/PHC.**

#### Check Your Progress Exercise 1

Answer the following questions briefly in the space below.

1) What are the three important functions performed by the skin?

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

2) State whether the following are correct or incorrect.

- a) Any darker or lighter patches on the skin, itching, secretion or rash indicate disease. ( )
- b) Scabies, fungus, heat rash and eczema are characterized by intense itching. ( )
- c) Leprosy is the commonest skin infection in children. ( )
- d) Rash due to measles, chicken pox and heat is accompanied with fever. ( )
- e) The lesions of scabies, fungal infections and eczema are wet and sticky. ( )
- f) Pale and scaly lesions are indicative of fungal infections. ( )

3) What are the symptoms of scabies?

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

4) How does scabies spread?

.....  
.....  
.....  
.....  
.....  
.....

5) How do skin ulcers develop?

.....  
.....  
.....  
.....  
.....  
.....

**26.3.3 Skin Sepsis**

**Symptoms and Causes:** This means that the skin is infected by bacteria. It can be infection of the hair follicles producing boils on any part of the body. Or the bacteria may infect already existing lesions like that of scabies, fungus, chicken pox or wounds.

When the infection from the skin gets into the bloodstream, it causes severe illness and is called septicaemia. This can be life-threatening and has to be treated immediately. Septicaemia is recognized by infected skin lesions, accompanied by fever and symptoms of toxicity (i.e., dry tongue, rapid breathing and, maybe, headache).

**Treatment:** Any skin lesion that is infected, has pus or shows redness and swelling, and is accompanied by fever, has to be treated by antibiotics. **Refer to the doctor immediately.**

**DO NOT SQUEEZE BOILS AS IT MAY SPREAD THE INFECTION INTO THE TISSUES OR BLOOD**

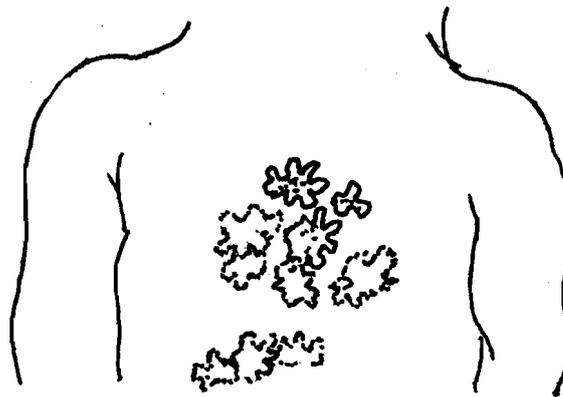
**SEPTICAEMIA CAN BE LIFE THREATENING AND HAS TO BE TREATED IMMEDIATELY**

**26.3.4 Fungus Infections**

Two types of fungal infections of the skin are commonly seen. Fungal infections usually take a long time to heal.

One fungus causes pale patches on the skin, which are usually seen on the chest and back. They do not cause any symptoms, but spread in hot and humid weather. When the child's nutrition improves, the patches disappear. The skin should be kept clean and dry.

The other infection is called "ringworm", as it starts as a small dot and grows from the outer edges, in a manner of a ring. The outer edges of the ring become raised and become larger, while the inner part heals. So they look like curved lines or rings. Though the name of the infection is 'ringworm', there is actually no worm in them. The patches may be slightly itchy and, on scratching, give off dry white scales. This infection spreads through clothes and is, also therefore, called "dhobi's itch". Ringworm has to be treated by the application of antifungal ointments. Refer to doctor for treatment. The clothes should be thoroughly washed and disinfected.



Ring Worm

### 26.3.5 Leprosy

**Symptoms and Causes:** Leprosy is caused by a bacterium like the one that causes tuberculosis. At times, it is considered to be a curse of the Gods, and when people lose their fingers or toes, they are isolated and society does not accept them. Such a harsh attitude towards leprosy patients is uncalled for.

Leprosy spreads only through prolonged close contact like in families. It does not spread through casual contact. It is only mildly infective.

Leprosy affects the nerves in the body, and the earliest sign is loss of sensation in any part of the skin. It begins as a pale patch on the skin. This patch does not itch. There is no sensation on this patch — if the person gets injured on that part of the skin, she does not feel any pain. There is no sensation of touch on this patch. When it affects the hand and feet, there can be repeated injury to the same part, and the tissues get eroded. Gradually, the fingers and toes and the entire hand and feet get affected, if no treatment is given.

Sometimes, the skin becomes thick and red, especially in certain areas like the ears and nose. This gives the peculiar appearance of leprosy.

Leprosy rarely affects children below two years of age.

**Treatment:** If you suspect leprosy in any child, refer to a hospital for tests. If there is a pale patch which does not itch, and there is no sensation of touch, it could be leprosy. There are many new medicines for leprosy and, if taken over a period, it is completely curable. There is no need to isolate the child, as it is not infective through casual contact.

The child should be accepted in the centre, and given proper treatment.

**LEPROSY IS CURABLE**

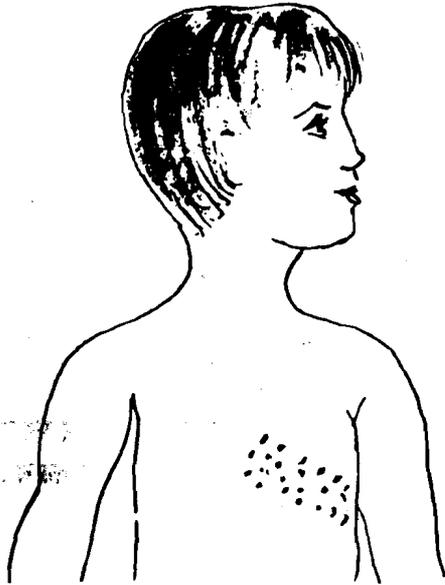
### 26.3.6 Virus Infections

The following are some infections caused by virus.

**Herpes Simplex:** Sometimes, when the child has fever or a cold, she may get small lesions around the mouth and nose. These are at first, red and painful, but later turn yellow and then form a crust and heal. This is called a “cold sore” or “Herpes simplex”. Usually no treatment is needed except for application of 1% Gentian Violet on the sores.

**“Herpes Zoster”:** This is caused by the chicken pox virus. However, unlike chicken pox, which appears all over the body, herpes zoster affects the skin along the distribution of only one nerve. Depending on which nerve is affected, the lesions appear on that part of the skin. The lesions are very painful. The pain starts before the lesions

appear and lasts long after the lesions have healed. Herpes zoster usually affects one of the nerves on the chest. So the lesions appear around the chest on one side — from the middle of the chest in the front to the middle of the back. The lesions go through the stages of macule, papule, vesicle, round half the body.

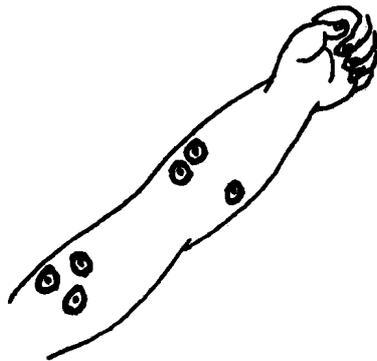


**Herpes zoster**

Herpes zoster has no specific treatment. Handle the child in the same way as you would a child who has chicken pox.

**Chicken-pox and Measles:** These have been dealt with in Unit 14.

**Warts:** This virus infection causes small, raised, smooth lesions with a depression in the middle. This infection spreads easily. It is commonly seen on the hands, face, neck and thighs. They last for a long time but produce no other symptoms. They are not painful. There is no particular treatment for this. They heal by themselves.



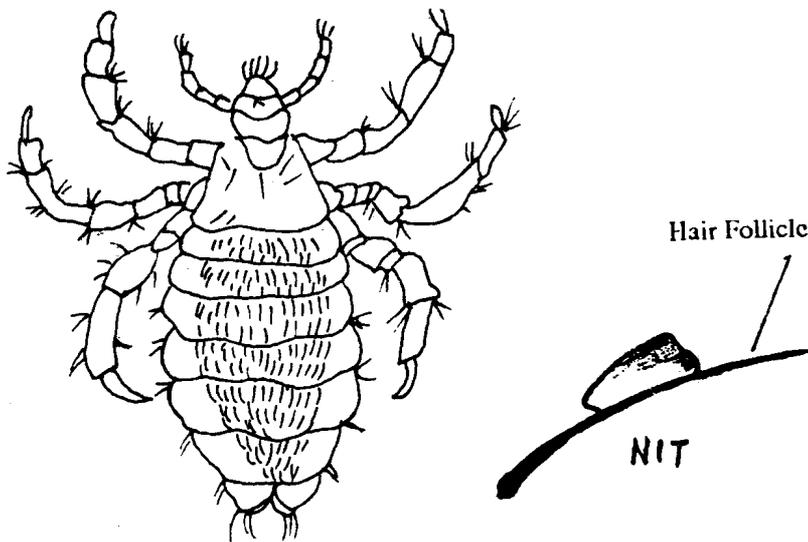
**Warts**

### 26.3.7 Head and Body Lice

These are small insects that live in the hair, and deposit their eggs on the hair, which are called "nits".

**Symptoms:** Lice makes the scalp very itchy. Severe infestation makes the child drowsy. Sometimes if the infestation is more, it spreads to the hair in the body, like the eyebrows and eyelashes.

**Treatment:** The hair has to be washed frequently with a strong antiseptic shampoo. Alternatively, apply medicine to the scalp that is recommended for hair lice. These are commonly available in the market. When the medicine or shampoo is applied, the lice become unable to move. They have to be combed out and the hair washed clean.



Head Louse

The medicine affects only the lice and not the nits (i.e. eggs). Therefore, when the eggs hatch in two weeks, the medicine has to be applied again to kill the lice.

**REPEAT THE MEDICINE FOR TREATMENT OF HEAD LICE AFTER A FORTNIGHT**

**Prevention:** Head lice is more common in dirty hair. So the mother and child should be told about the importance of clean hair.

A home remedy is to use powdered "methi" (fenugreek) seeds in coconut oil daily. This helps keep away head lice.

## 26.4 OTHER SKIN CONDITIONS

### 26.4.1 Heat Rash

**Symptoms and Causes:** This is also called "prickly heat", and is caused by blocking of the sweat glands in very hot weather. The skin feels prickly and is intensely itchy. This occurs commonly on the chest, back, neck and forehead.

**Treatment:** The skin has to be kept cool and some talc may relieve the itching. Use of pure cotton clothing is recommended.

### 26.4.2 Eczema

This is an allergic skin condition.

**Symptoms:** It causes symmetrical patches on the body (same on both sides of the body). The patches are itchy and red. The eczema may be dry and very itchy, forming black patches on the skin. Or due to severe scratching, the serum starts oozing from the skin and it becomes "wet eczema". They may also become infected due to scratching.

**Causes:** As you know, eczema is an allergic condition. It may be caused by dust, pollen or some foods. A careful history has to be taken to find out the cause. When children have allergic reactions, they may have asthmatic attacks and eczema — with both occurring at the same time, or alternately i.e., when the skin is better the asthma is worse, and when the asthma is better, the eczema gets worse.

**Treatment:** Refer the child to the doctor. The child will be given some anti-allergic medicines, and some ointment for local application. The cause of allergy, like some item of food, or pollen or dust, should be identified and avoided to prevent spread. It is better not to apply harsh soaps on the lesions, but soap can be used on the rest of the body.

### 26.4.3 Urticaria

This is an acute allergic condition of the skin.

**Symptoms and Causes:** It is usually caused by insect bites or due to intake of certain foods/medicines the patient is sensitive to. The symptoms are redness and swelling of the skin. Sometimes, the swelling is over a large area and looks like a bump. It lasts for a short time, and does not become septic.

**Treatment:** Giving anti-allergic medicines prescribed by the doctor, helps.

### 26.4.4 Leucoderma

This is a condition where there are white patches on the skin. They can be of any size, and of any distribution (i.e., anywhere in the body). There is no pain or itching on these patches. They are caused by the absence of pigmentation in the skin. They do not lead to any other problem, other than affecting the appearance. The cause is unknown and there is no treatment.

---

## 26.5 PREVENTIVE CARE OF THE SKIN

---

**Most skin problems can be prevented if the skin is kept clean by regular baths and wearing clean clothes. Harsh detergents and other chemicals that harm the skin should not be used for cleaning.**

**Skin infections should be immediately treated to prevent spread. Exposure to infections like leprosy should be noted.**

If the child lives in an area or family where skin infections are common, then the child has chances of catching the infection. Take the necessary steps to prevent skin infection by treating the whole family. Their clothes have to be properly washed.

### Check Your Progress Exercise 2

- 1) Fill in the blanks:
  - a) Ringworm is a form of .....
  - b) Chicken pox and ..... are produced by the same virus.
  - c) A pale patch with no sensation could be .....
  - d) Eczema is an ..... skin condition.
  - e) Red swelling on the skin that does not become septic and lasts for a short time is .....
  - f) Herpes simplex occurs around .....
  - g) Itchy, red and sticky patches are due to .....

- 2) What are the symptoms of septicaemia?
 

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

3) How would you differentiate between the symptoms of chicken pox and herpes zoster?

.....  
.....  
.....  
.....  
.....

4) Why is it important to repeat the medicine for head lice in a fortnight?

.....  
.....  
.....  
.....

5) How can skin infections be prevented?

.....  
.....  
.....  
.....

6) What are the symptoms of warts and where do they commonly occur?

.....  
.....  
.....  
.....

---

## 26.6 SUMMING UP

---

In this Unit you have read about some skin infections, their symptoms, causes, treatment and prevention. The skin protects the body from harmful organisms, regulates the body temperature and is a sense organ of touch.

A skin lesion is the sign of a skin infection. It is important to know how the lesion occurred, on which part of the body it is present, its size and colour, itching, pain or loss of sensation on the lesion to determine the type of skin infection.

Scabies is the commonest skin infection in children and spreads from person to person through close contact.

Skin ulcers occur when the child meddles with a wound, causing it to be infected.

Any skin lesion that becomes infected, causing the infection to reach the bloodstream, causes septicaemia. Lesion with pus, swelling and redness and accompanied with fever must be immediately referred to the doctor as they can be life threatening.

Leprosy is curable, if identified in the early stages. Any pale patches on the skin with loss of sensation should be suspected for leprosy.

Herpes simplex, herpes zoster, chicken pox, measles and warts are viral infections of the skin.

Head and body lice are to be treated using medicated shampoos or medicines that can be applied on the scalp twice at an interval of a fortnight.

Eczema and urticaria are allergic skin conditions.

Skin infections can be prevented by taking proper care of the skin and wearing clean clothes.

---

## 26.7 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

---

### Check Your Progress Exercise 1

- 1) a) Protects the body against harmful organisms  
b) Regulates body temperature  
c) Is a sense organ of touch
- 2) a) Correct  
b) Correct  
c) Incorrect. Scabies is the commonest skin infection in children.  
d) Incorrect. Heat rash is not accompanied with fever.  
e) Incorrect. Lesions of fungal infections and scabies are dry.  
f) Correct.
- 3) Small raised individual lesions in between webs of fingers, armpits, wrists, insides of thighs and buttocks. They are itchy and dry. As the child scratches, the lesions join together and become filled with pus and become yellow.
- 4) It spreads through close contact with each other and from clothes. If one person is infected, usually the whole family gets it.
- 5) Any scratch or wound that becomes infected, leads to skin ulcer.

### Check Your Progress Exercise 2

- 1) a) Fungus  
b) Herpes zoster  
c) Leprosy  
d) Allergic  
e) Urticaria  
f) Mouth and nose  
g) Eczema
- 2) Infected skin lesions filled with pus, red and swollen, accompanied with fever and symptoms of toxicity (i.e, dry tongue, rapid breathing and headache)
- 3) Chicken pox appears all over the body. Herpes zoster affects the skin along the distribution of one nerve only. Depending upon which nerve is affected, the lesions appear on that part. It usually affects the chest.

**Common Childhood Illnesses,  
Their Prevention and  
Management - 2**

- 4) Because the medicines do not affect the eggs. These then hatch in a fortnight and the lice have to be removed again.
- 5) By keeping the skin clean through regular baths; wearing clean clothes; not using chemicals or detergents that would harm the skin; immediately treating skin infections.
- 6) Warts are indicated by small, raised smooth lesions with a depression in the middle. They commonly occur on the hands, face, neck and thighs.